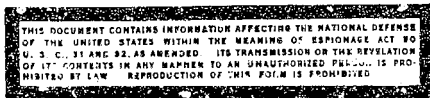


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JUNE 1949 CONFERENCE AT LENINGRAD ELECTRICAL
 ENGINEERING INSTITUTE IMENI UL'YANOV (LENIN)

A. V. Basharin
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Representatives of industry, scientific research organizations, and higher technical schools attended the scientific research conference held at the Leningrad Electrical Engineering Institute imeni Ul'yanov (Lenin) in June 1949. The conference members heard and discussed 61 reports.

At the plenary session, the following reports were submitted: Professor V. P. Vologdin, Corresponding Member, Academy of Sciences USSR, "Prospects for the Development of High-Frequency Techniques and Their Applications to Industry"; Docent B. P. Kozyrev, Candidate of Technical Sciences, "The Photoelectric Method of Measuring Infinitely Small EMF's and Prospects for Its Application and Development"; and Professor N. P. Bogoroditskiy, Doctor of Technical Sciences, "The Electrical Strength of Ceramics and Glass." At the closing plenary session, Professor D. V. Vasil'yev, Doctor of Technical Sciences, submitted a report, "Fundamentals in Constructing a Follower System." In his report, "An Ultrasonic Microscope," Professor S. Ya. Sokolev, Doctor of Technical Sciences, discussed the construction and operation of an instrument in which ultrasonic oscillations are used to observe small particles in a medium which is opaque to light.

The following reports were submitted in the radio engineering section: Professor S. I. Panfilov, Doctor of Technical Sciences, "Determining the Initial Constants of a Steady-State Process by the Least Squares Method for Electrical Circuits With Distributed Constants"; Docent F. Ye. Yevtseyev, Candidate of Technical Sciences, "A Mass-Production Crystal Receiver Using Printed Circuits"; Docent I. V. Brenev, Candidate of Technical Sciences, "The Influence of Meteorological Conditions Upon Ultrashort-Wave Propagation"; Docent I. N. Valyayev, "The Theory and Design of the Cathode Detector"; Docent Ye. I. Manayev, Candidate of Technical Sciences, "A Phase-Comparing Device"; Professor Ya. A. Ryftin, "The Problem of Correcting Television Pictures"; Docent O. B. Lur'ye, Candidate of Technical Sciences, "The Properties of Transient Characteristics of Video-Frequency Amplifiers"; Docent G. S. Ramm, Candidate of Technical Sciences, "Calculation of the Current in a Diode Operating on Superhigh

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...and Engineer V. N. Bulgakov, "Certain Features of the Design of Low-Power Transformers for Radio Equipment."

The following reports were submitted in the electronic engineering section: Docent A. A. Potsar, Candidate of Technical Sciences, "Measuring Deionization Time"; Docent K. V. Stakhorskiy, "The Use of Electric Heating in the Production Technology of High-Vacuum Electrical Equipment"; Engineer L. B. Krasil'shchikov, "A Photoelectric Device to Compensate for Skewing of the Weft Thread in Stenters"; Docent Yu. A. Katman, Candidate of Technical Sciences, "Phenomena Occurring in the Interaction of a Variable Stream of Electrons With an Electric Field"; Engineer E. I. Golovanevskiy, "Comparative Evaluation of the Possible Use of Electron-Beam Amplifiers as Preliminary Amplifiers in the Centimeter Band"; and Engineer V. P. Panov, "Experimental Studies of Oxide Cathodes in Pulse Operation."

The following reports were submitted in the section on electrical machines, electric drive, and power engineering: Professor N. P. Yermolin, Doctor of Technical Sciences, "Transient Processes in Complex Excitation Circuits for Electrical Machines"; Docent I. S. Zaretskii, Candidate of Technical Sciences, "Calculating the Dynamic Characteristics of Direct-Current Welding Generators"; Professor V. T. Kas'yanov, Doctor of Technical Sciences, "Starting and Reversing Characteristics of a Synchronous Motor Used for Propeller Drive"; and A. V. Basharin, Candidate of Technical Sciences, "The Use of Tensor Analysis to Study the Dynamics of Electric Drives."

In his report, "Electronic Regulators and Their Operational Results in Paper Machines of the USSR," Engineer V. D. Baryshnikov discussed the aid given industry by scientists. The electronic regulators controlling voltage, speed, and speed ratios of paper-making machine motors (including a regulator with a frequency meter) which are now used in paper combines of the USSR were described. A power (feed) regulator of continuous defibrers, developed by the Leningrad Department of "Elektroprom" with the aid of the Chair of Electrification of Industrial Enterprises, Leningrad Electrical Engineering Institute, was also described.

N. G. Shtol'tser submitted a report, "Method of Calculating the Parameters in Self-Regulating Systems." In his report "Contemporary Problems in Power Supply for Industrial Purposes," Docent K. V. Bulgakov, Candidate of Technical Sciences, discussed problems concerned with saving electric power and fuel in industry.

Other reports submitted in this section were: Docent V. N. Shevtsov, "Operating Conditions of Electric Power Stations in Water Transport Constructions"; Docent B. I. Arkhangel'skiy, "An Astatic Voltage Regulator"; G. S. Filippov, Candidate of Technical Sciences, "Problems Related to the Stability of Power Synchro-Follower Systems"; and Engineer G. S. Chernorutskiy, "A Method of Analyzing the Stability of Operation of Electric Drives."

The following reports were submitted in the section on high-voltage techniques and electrical insulating materials: Professor V. I. Ivanov, Doctor of Technical Sciences, "Design of Direct-Current Electromagnets"; Docent V. V. Pasyukov, Candidate of Technical Sciences, "Methods of Testing and Ways of Improving the Quality of Ceramics Used in Automobile Spark Plugs"; D. V. Shishman, Candidate of Technical Sciences, "A New Method of Evaluating the Quality of Parts, Using the Theory of Probabilities"; Engineer M. V. Kurlin, "Stabilization of Liquid Dielectrics With Antioxidants"; Docent Yu. Ya. Yurov, Candidate of Technical Sciences, "A Direct-Reading Instrument for Measuring the Energy of an Arc"; P. N. Matkhanov, Candidate of Technical Sciences, and Engineer Yu. A. Rozovskiy, "Breakdown of Air Between Rotating Electrodes"; Engineer R. K. Manakov, "New Types of Condensers Made From Glass"; and Engineer A. I. Igritskiy, "Study of the Electrodynamical Stability and Quenching of an Electric Arc in Automatic Circuit Breakers With an Iron Arc-Suppressing Grid."

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In the electronics section, Docent R. K. Kuznetsov, Candidate of Technical Sciences, submitted a report, "The Probability of Arc-Back in Mercury-Arc Rectifiers Connected in Series."

Members of the Chair of Higher Mathematics also took part in the work of this section. Docent D. A. Dobrotin, Candidate of Physicomathematical Sciences, submitted a report, "Application of the Method of Sources (and Sinks) to the Theory of Wave Propagation in a Cable." Engineer A. G. Lunts discussed "The Use of Algebraic Methods in Studying Relay-Contact Systems Not of the Parallel-Series Type," and Professor N. G. Boldyrev, Doctor of Technical Sciences, submitted a report, "The Application of Lobachevskian Geometry to the Theory of Color."

In the section on instrument building and automatics, N. A. Yefimov, Plant Director, submitted a report, "The Creative Cooperation of Workers in Science and Industry in Instrument Building."

Other reports submitted included: Docent R. I. Yurgenson, Candidate of Technical Sciences, "Structural Units for Contemporary Telecontrol Equipment"; Docent L. I. Bayd, Candidate of Technical Sciences, "Methods of Increasing the Stability of Direct-Current Amplifiers"; Docent V. P. Merzhvinskiy, Candidate of Technical Sciences, "Study of Impact Reactions in Alternating-Current Contactors"; Docent V. S. Mochalin, Candidate of Physicomathematical Sciences, "Two Theorems on Gyrointegrators"; and Docent P. I. Saydov, Candidate of Technical Sciences, "Solution of a Nonlinear Problem on Gyrostabilization."

In view of the fact that the conference was held simultaneously with the All-Union Session on Electrical Instrument Building, the following reports were presented at the latter session: A. V. Fremke, Doctor of Technical Sciences, "Contemporary Trends in the Development of Telemetering Techniques"; D. L. Orshanskiy, Candidate of Technical Sciences, "Several Problems of Electrical Pyrometry"; and Docent N. N. Razumovskiy, Candidate of Technical Sciences, "The Transverse Magnetic Field in a Permanent Magnet."

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